

January Monthly Educational Module

“An Overview of the Lower Mississippi River Forecast Center”

Day 1

The Lower Mississippi River Forecast Center is excited to announce the start of its monthly educational modules! We will pick a different topic each month and post information on those topics for 2 weeks. You can find these posts on our Facebook and Twitter pages linked below.

Facebook: <https://www.facebook.com/US.NationalWeatherService.LMRFC.gov>

Twitter: <https://twitter.com/NWSLMRFC>

Let's begin! For the month of January, we have selected the topic, “An Overview of the Lower Mississippi River Forecast Center.” This is an opportunity for us at the LMRFC to give you a little insight into the LMRFC and what we do. To start, here's a quick introduction to the LMRFC. Enjoy!

LMRFC

Lower Mississippi River Forecast Center



- The Lower Mississippi River Forecast Center (LMRFC) is located in Slidell, Louisiana (about 30 miles northeast of New Orleans)
- It's co-located with the National Weather Service's New Orleans/Baton Rouge Weather Forecast Office.
- Our office is open seven days a week, 365 days a year, from 6AM to 10PM, and is prepared to go on 24 duty when necessary.
- We provide daily river forecasts on the lower Mississippi River and its tributaries.
- This comprises over 200 forecast points in a 220,000 square mile area throughout the Southeast U.S.



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Day 2

Now, many people wonder and ask, “What is the purpose of a river forecast center?” Check out this graphic to learn more about our mission!



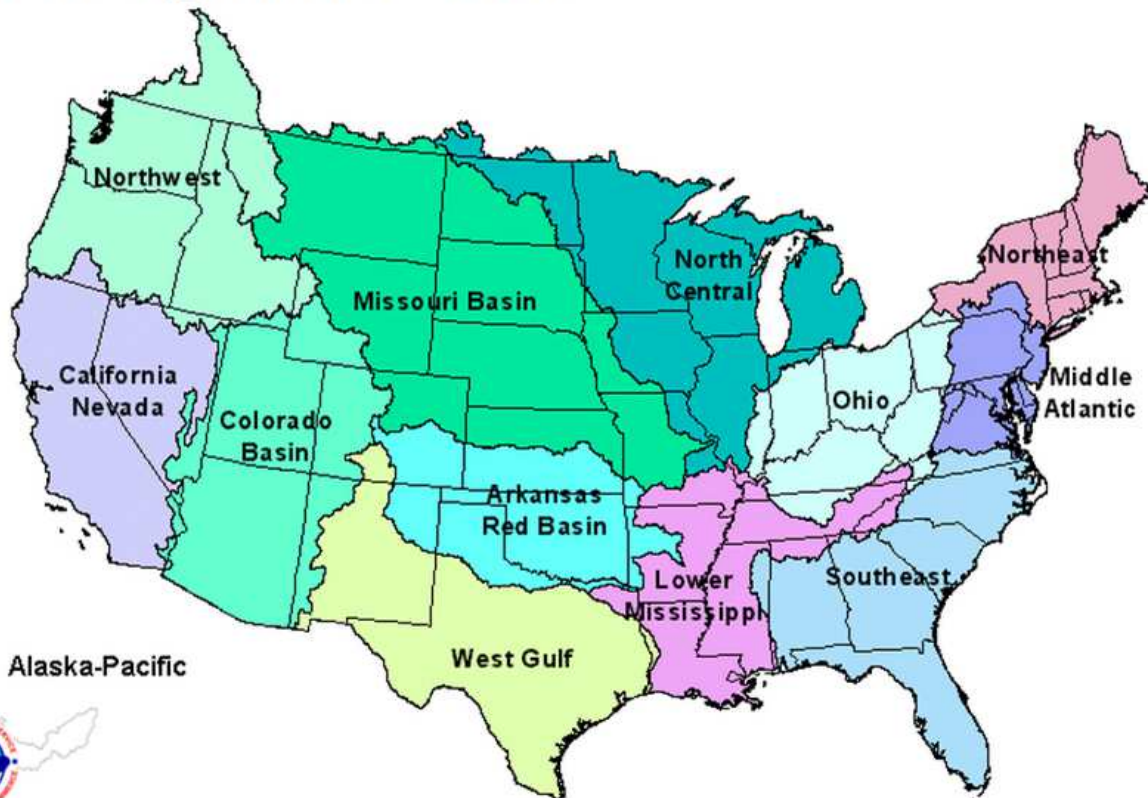
Day 3

Did you know that the Lower Mississippi River Forecast Center is one of 13 River Forecast Centers in the National Weather Service?

The 13 different River Forecast Centers are labeled in the graphic below. As you can see, there are 12 RFCs in the contiguous U.S. and one in the Alaska region. The RFCs are divided up by hydro-geologic boundaries across the United States. To check out the closest River Forecast Center in your area, visit <http://water.weather.gov/ahps/rfc/rfc.php>

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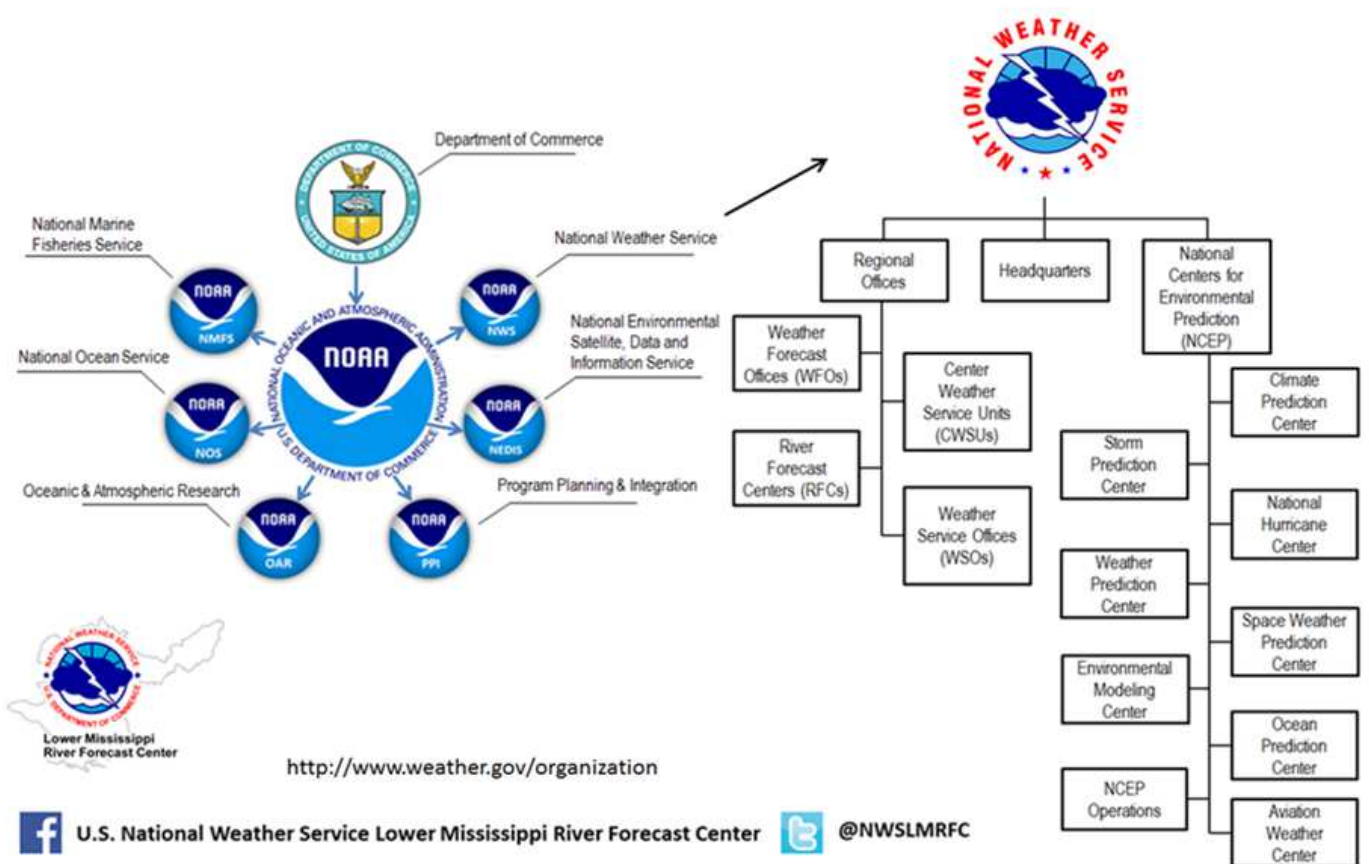
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Day 4

Have you ever wondered how the National Weather Service and its offices and centers are structured in the government? Well, you are in luck! Check out the flow chart below to see where the River Forecast Centers fit in the scheme of things.

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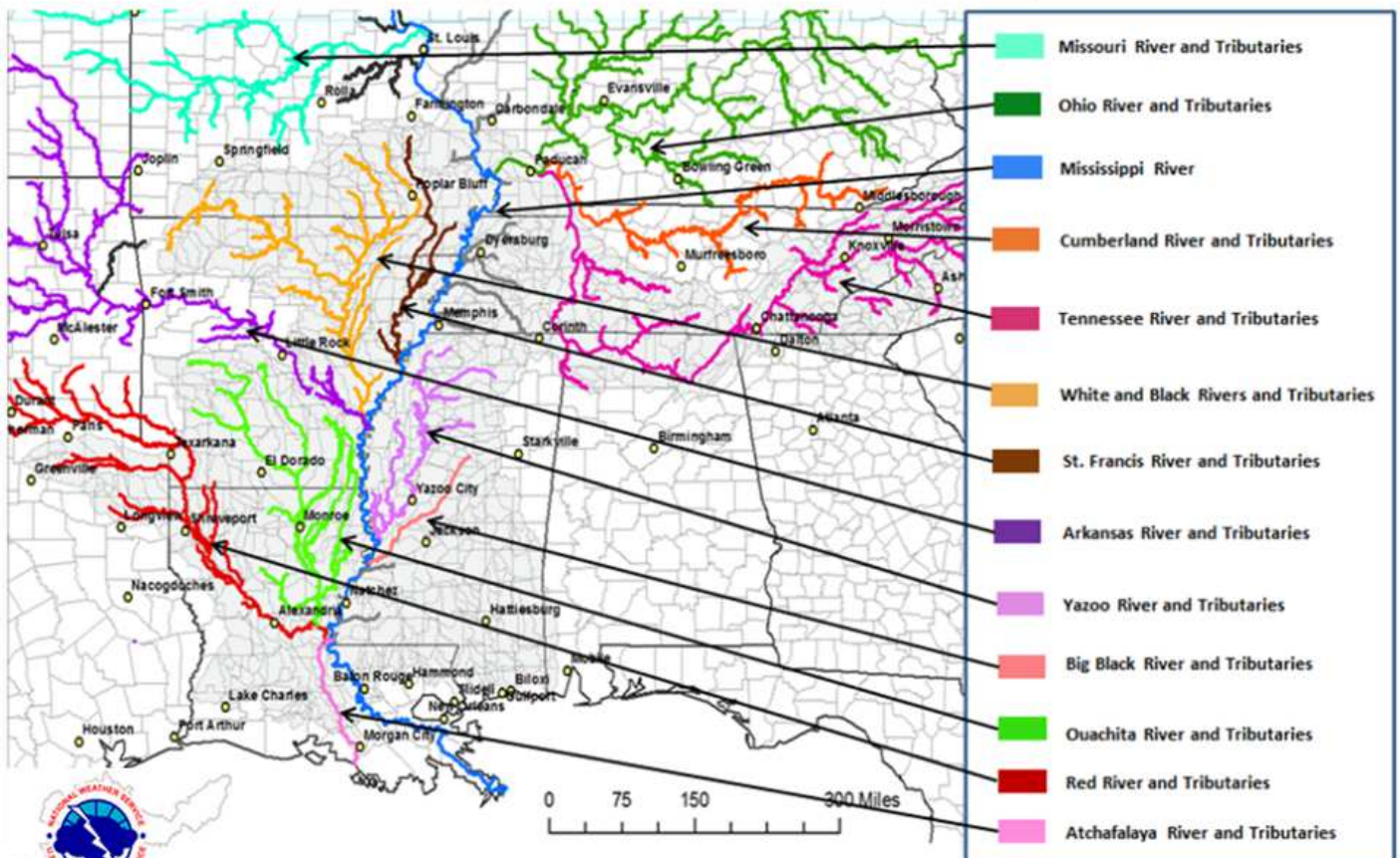


Day 5

On a daily basis, one of the biggest things we do at the Lower Mississippi River Forecast Center is issue hydrologic forecasts for all the rivers and tributaries that flow into the lower portion of the Mississippi River. Let's take a closer look into the LMRFC area to see what we are talking about. Check out the graphic below for a breakdown of the major rivers that contribute to the mainstem of the lower Mississippi River.

As you can see, we cover a larger portion of the Southeast U.S., which includes portions of 12 states. As a result, we service a large population on a daily basis. That's why we, the forecasters, make sure we issue the most up-to-date forecasts. To view our forecasts, visit our website with the link here: <http://www.srh.noaa.gov/lmrfc/>

Mississippi River and Significant Tributaries/River Systems



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Day 6

As we have seen in our previous posts as well as in the graphic below, the LMRFC covers a large area with several handoff points. As a result, we work with several entities inside and outside our agency to get all the information we need for our forecasts.

We will be devoting one of our monthly modules to our partners in the near future. But, in the meantime, you can check out their websites below for more information!

U.S. Army Corps of Engineers: <http://www.usace.army.mil/>

U.S.G.S.: <http://www.usgs.gov/>

TVA: <http://www.tva.gov/>

FEMA: <http://www.fema.gov/>

National Weather Service: <http://www.weather.gov/>

National Hurricane Center: <http://www.nhc.noaa.gov/>

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Since most of the rivers and tributaries in the LMRFC area extended beyond our governing area, we partner with many different agencies:

- U.S. Army Corps of Engineers
- U.S. Geological Survey
- Tennessee Valley Authority
- FEMA
- Emergency Managers
- Academia
- NWS Weather Forecast Offices (18)
- NWS River Forecast Centers (4)
- NWS National Hurricane Center



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Day 7

For all of our history buffs out there, here's a quick history lesson on the Lower Mississippi River Forecast Center!

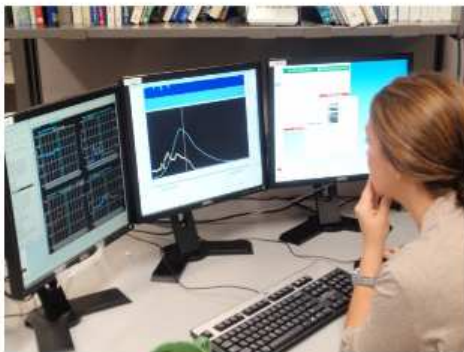
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Then



Now



- The LMRFC was founded in 1971 but officially commenced operations in January of 1972.
- No single flood motivated the formation of this RFC.
- Instead, its start up resulted from the need to complete the coverage of the nation by RFCs and to provide coordinated forecasts for the economically critical lower Mississippi basin.
- Since it commenced operations, the LMRFC responsibility area of over 220,000 square miles has essentially remained unchanged.



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Day 8

Now, let's take a look at the Lower Mississippi River Forecast Center's staff. The LMRFC has 12 forecasters, 3 managers, and 1 administrative assistant, who come from different educational fields. This past year, one of the LMRFC's Senior Hydrologists, Katelyn Costanza, was named the 2013 Gregg B. Rishel Award winner! To learn more about how the LMRFC is staffed and who works here, check out the graphic below!

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Lower Mississippi River Forecast Center



- RFCs hire forecasters from a wide variety of backgrounds.
- The LMRFC has meteorologists, hydrologists, civil engineers, and geologists
- The LMRFC staffing includes:
 - 1 Hydrologist-in-Charge (HIC)
 - 1 Development Operational Hydrologist (DOH)
 - 1 Service Coordination Hydrologist (SCH)
 - 3 Hydrometeorologists - HAS Forecasters
 - 9 Hydrologists
 - 1 Administrative Support Assistant (ASA)



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Day 9

Now, for the BIG question...What exactly do we do at the Lower Mississippi River Forecast Center (LMRFC)? Well, in a nutshell, our forecasters at the LMRFC issue daily precipitation and hydrologic forecasts to support our mission of protecting lives and property. We also conduct research and development projects to improve our resources, as well as provide decision support services to our customers and partners.

Our daily operations can be broken into two main categories. One category is our hydrometeorology operations, which include all of our precipitation datasets and forecasts. The other category is our hydrologic operations, which include all of our river data and forecasts. For more information on these operations, check out the graphic below.

We would also like to mention that we will be covering our daily operations, forecasts, and the forecast process in their own monthly module in the near future. So, stay tuned for more!



Daily Operations

Hydrometeorology Operations

- Forecast future precipitation
- Maintain and review observed precipitation data
- Issue Flash Flood Guidance products

Hydrologic Operations

- Issue 5 day river forecasts for 222 daily forecast points in the LMRFC area
- Maintain hydrologic and hydraulic models, as well as historical river data



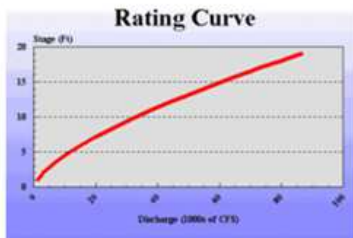
Day 10

Here at the Lower Mississippi River Forecast Center, we use many different tools to get all the information we need for our forecasts. These tools are used to collect data that go into our weather, hydrologic, and hydraulic models in order for us to issue the most accurate forecasts. To see some of the tools we use on a daily basis, check out the graphic below.

In the future, we will have a special monthly module that will go into further detail of all the tools we use on a daily basis.

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Rating Curves



Buoys



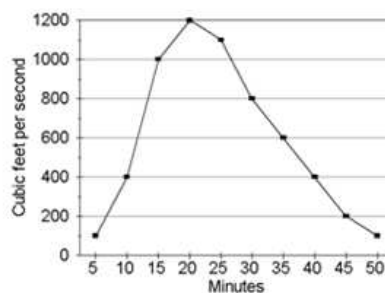
River Gauges



Radars



Upper Air Balloons



Rain Gauges



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Day 11

Because there is a range of flood hazards that can occur every year, the Lower Mississippi River Forecast Center has to be prepared to handle whatever Mother Nature brings, especially when multiple flood hazards occur at one time. Therefore, the LMRFC is prepared to implement 24 hour operations during high impact flooding events. Check out the graphic below to see the spectrum of flood hazards that impact the LMRFC's operations. In the future, there will be a monthly module featuring some of the big flood events that the LMRFC has had to deal with in its history.

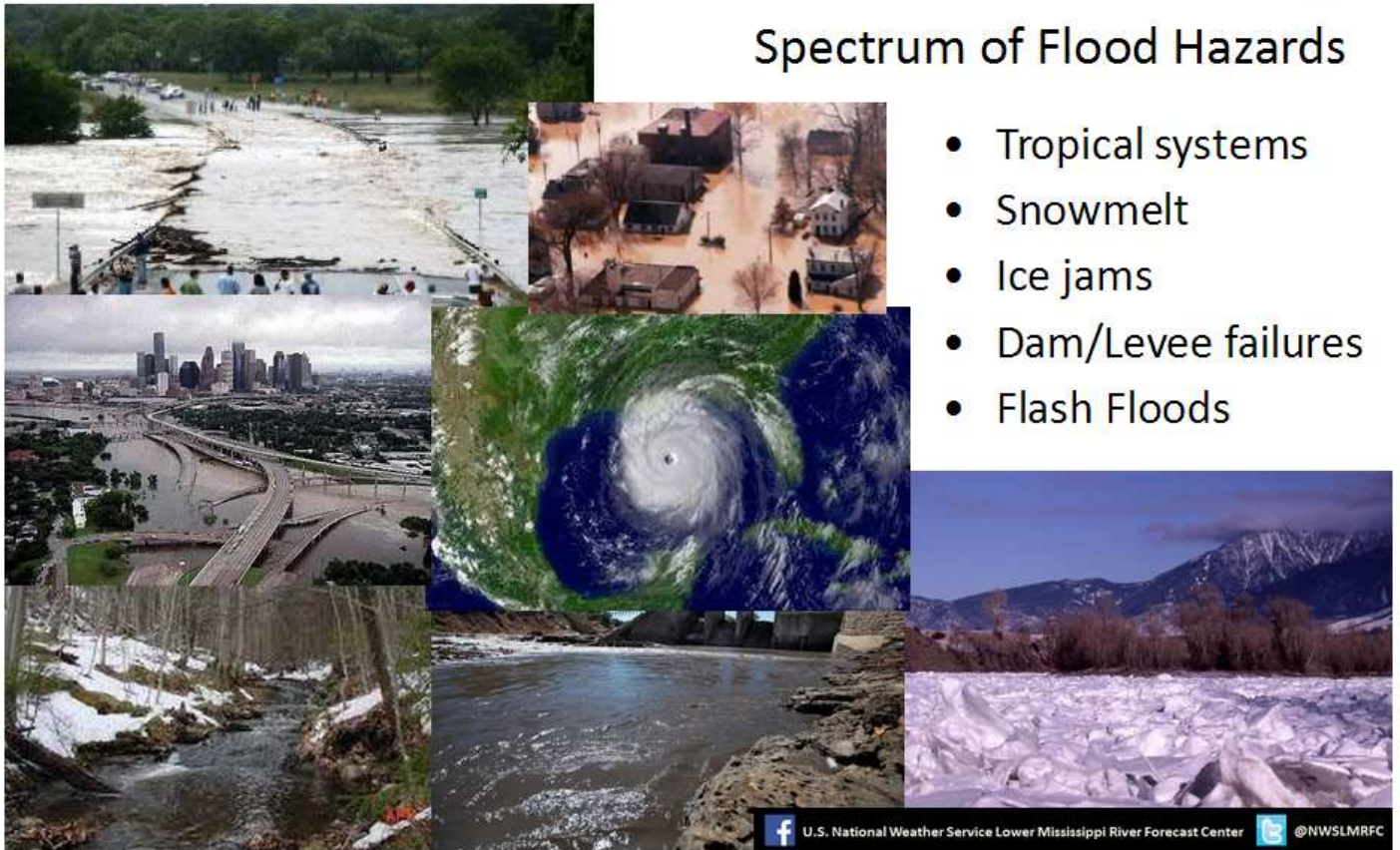
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Spectrum of Flood Hazards

- Tropical systems
- Snowmelt
- Ice jams
- Dam/Levee failures
- Flash Floods



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Day 12

Did you know that the Lower Mississippi River Forecast Center participates in outreach activities for the community? When things are quieter, LMRFC forecasters can be seen giving talks at local schools, environmental programs, and many other places. Check out the graphic below to see our forecasters in action! If you would like for a forecaster to come speak at your next event, feel free to contact us.

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Outreach

- School Visits
- Tours
- Wild Things
- Ocean Commotion
- Wild Life Day
- Open Houses



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This is the last post for the Lower Mississippi River Forecast Center's January monthly educational module! We hope you have enjoyed learning a little bit about the LMRFC and what we do here. And, we hope you will stick around for our next monthly module!